Dairy Situation and Outlook: 1984 and 1985[1]

A couple of key points need to be made at the outset of these comments. One, for the first time in five years, it is possible to talk about an improving dairy situation in the U.S. in terms of declining production and increasing sales, even while the situation in terms of financial stress at the dairy farm is serious. Two, the entire milk industry is already pointing to October 1, 1985, when a new dairy program presumably will be an integral part of the Agriculture and Food Act of 1985. It is absolute that there be a new dairy program in 1985 because most provisions of the present Dairy Production Stabilization Act of 1983 (Diversion Program) expire in 1985; without new legislation, the dairy price support program on October 1, 1985 will revert to the permanent authority of the Agricultural Act of 1949 with its 75 to 90 percent of parity proviso. By the fall of 1985, 75 percent of parity will approximate $17.00 per cwt., almost $4.50 higher than our current $12.60 support price. That is something unthinkable and therefore we will have a new 1985 dairy program.

The Surplus Problem Defined

The overriding problem in the milk industry in the past four years has been an excess of milk production over commercial demand. A review of the problem data provides a useful foundation for assessing the 1985

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dairy outlook.

Year	U.S. Milk Production	Aggregate Commercial Demand	CCC[a] Purchases
1978	121.46 Bil. Lbs.	118.8 Bil. Lbs.	2.7 Bil. Lbs.
1979	123.41	120.2	2.1
1980	128.53	119.2	8.8
1981	133.01	120.5	12.9
1982	135.80	122.4	14.3
1983	139.97	122.8	16.8
1984[b]	(136.10)	(126.5)	(10.0)

[a]Not an absolute difference between production and demand because of imports, stocks, and milk kept on the farm.

[b]Estimate.

As the numbers indicate, U.S. milk production began increasing significantly in 1979 and was up by 16 billion pounds in 1983 over the 1979 output. At the same time, annual commercial demand was up by only 2.5 billion pounds through the 1979-1983 period. Since milk prices are supported by an open-ended purchase program administered by the Commodity Credit Corporation, price support purchases increased to the record 16.8 billion pounds milk equivalent acquired in 1983. Highly visible problems of $2.6 billion net expenditures for dairy price support in fiscal 1983, and very large and vulnerable CCC inventories of butter (350 million pounds), cheese (850 million pounds), and nonfat dry milk (1,375 million pounds) in early 1984, further highlighted the problem. Something had to be done.

Legislative Overview

One cannot talk about the dairy surplus problem without discussing the legislative attempts to resolve the problem, particularly the current

price support provisions. The following sequence helps to put the situation in perspective.

1. Agricultural Act of 1949 -- permanent authority for dairy price support; 75 to 90 percent of parity.

2. The Food and Agriculture Act of 1977 amended the 1949 Act to establish the support price at 80 to 90 percent of parity. Five points of parity is equivalent to $1.00 per cwt. That was the start of our current dairy problem.

3. March 31, 1981 -- President Reagan signed a measure that suspended a mid-year increase in the $13.10 support price.

4. Agriculture and Food Act of 1981 -- suspended parity prices for the first time by legislating a schedule of dollar and cent support prices.

5. Omnibus Budget Reconciliation Act of 1982 -- Held support prices at $13.10 and introduced the concept of 50 cent per cwt. assessments to pay for price support.

6. Dairy Production Stabilization Act of 1983 -- is the name of the dairy title of the Dairy and Tobacco Adjustment Act of 1983. President Reagan signed this bill into law on November 29, 1983, and it constitutes our present dairy price support program. It is the program that sets us up for wherever we will start October 1, 1985. Briefly, the law carries four key provisions.

a. Support Price -- drops from $13.10 to $12.60 on December 1, 1983. On April 1, 1985, the support price may be dropped to $12.10 if CCC purchases are projected to exceed 6.0 billion pounds m.e. in the oncoming year. Three months later, July 1, 1985, the support

price may be dropped to $11.60 if CCC purchases are projected to exceed 5.0 billion pounds m.e. in the oncoming year. The option is also there to hold or increase the support price by 50 cents on July 1, 1985 if conditions warrant. Regardless, a new dairy program will be in place October 1, 1985.

b. 50 Cent Surplus Assessment -- All producer milk marketed in the U.S. has been subject to a 50 cent per cwt. assessment since April 16, 1983 ($1.00 in the fall of 1983). The 50 cents is earmarked for paying the $10 diversion payments. The assessment ends at the termination of the diversion program, March 31, 1985. Opinion holds that the assessments (and the diversion program) will not be legislatively extended).

c. Dairy Promotion Assessment -- Effective May 1, 1984, all producer milk marketed in the U.S. became subject to a mandatory 15 cent per cwt. assessment for dairy product promotion purposes. Total annual promotion revenue is increased to about $200 million, up substantially from the $60 million previously accrued in various programs. The National Dairy Promotion Board (36 members) is in place, and promotion efforts are underway. The program is subject to a renewal referendum by dairy farmers in August, 1985.

d. Diversion Program -- Most of us became fairly well acquainted with the Milk Diversion Program early this year. Recall that it is a voluntary program that lasts only 15 months (ends March 31, 1985). Producers contracted with USDA to reduce marketings of milk by 5 to 30 percent below their base (usually a 1982 base). For milk not marketed, and if contract specifications are met, producers are receiving $10 per cwt.

A total of 37,888 dairy farmers, representing about 22 percent of milk production in the U.S., signed up in the program. Disappointment at the amount of participation was an initial reaction to the program; however, some things are happening in the milk industry that are making the diversion program look like it is achieving some of its surplus reducing objectives.

OUTLOOK
Milk Production

The production turnaround has occurred. For 58 consecutive months, starting with May, 1979 and running through February, 1984, monthly milk production was higher than in the same month the previous year. That was an unprecedented surge in the post World War II period. Now in mid 1984, because of the diversion program, lower producer milk prices, a depressed milk-feed price ratio, and relatively strong cull cow prices, milk production has been declining for several months and promises to continue dropping until the spring of 1985.

Table 1. U.S. Milk Production, By Months, 1984

Month	Milk Production	Change From Same Month Last Year
Jan, 1984	11.49 Bil. Lbs.	+0.1 pct.
Feb*	10.91*	+1.7*
Mar	11.74	-2.6
Apr	11.67	-2.4
May	12.28	-2.8
Jun	11.83	-3.6
Jul	11.5 /	-4.1

*29 days in 1984; 28 day production was down from Feb., 1983.

Data on milk cow numbers and production per cow take us a little

bit closer to analyzing milk production. The U.S. dairy herd today is only about 40 percent as large as it was at its peak in World War II. The long time downtrend in milk cow numbers reached bottom in June, 1979 (10,706,000 cows), increased by 440,000 cows to 11,170,000 animals in November, 1983, and has now been cut significantly in these past few months (minus 322,000) to 10,848,000 dairy cows in June. Dairy cow numbers by months since the late 1983 peak have shown as follows:

Month	Milk Cows
Oct, 1983	11,159,000
Nov	11,170,000
Dec	11,146,000
Jan, 1984	11,064,000
Feb	10,958,000
Mar	10,890,000
Apr	10,856,000
May	10,851,000
Jun	10,848,000
Jul	10,821,000

It is evident that the diversion program had a substantial impact on cow numbers in the December 1983 through April 1984 period. However, the decline has slowed substantially this summer as producers face increasingly difficult culling decisions. At this juncture, it appears that cow numbers will continue to decline at a slow rate until April, 1985, and then it is anybody's guess. The diversion program ends March 31, 1985, and then other economic factors will surface -- milk price, feed costs, replacement heifers, beef prices -- in adjusting the national dairy herd size.

Production Per Cow: Production per cow in the U.S. has trended as follows since 1980.

Year	Production Per Cow
1980	11,889 Lbs.
1981	12,177
1982	12,309
1983*	12,587*
1984*	12,520*

*Record
**Estimate

One expectation with the diversion program was that the closer culling would increase production per cow markedly. In fact, the opposite has happened, at least in the first few months of the diversion program. A primary factor in the reduction has been a backing off in the feeding program. In recent years, the quantity of grain and other concentrates fed daily per milk cow in the U.S. has exceeded 15 pounds. In 1983, it reached a record 15.7 pounds per day. But the July 1, 1984 estimate was down to 14.9 pounds, the first reversal in many years. Two factors -- (1) trying to comply with the diversion program, and (2) a depressed milk-feed price ratio, seem to explain the reduction in feeding and thus the decrease in production per cow.

The milk-feed price ratio continues to be a key factor affecting the level of milk production (milk-feed price ratio is the pounds of 16 percent protein mixed dairy feed equal in value to 1 pound of milk). In July, 1984, the milk-feed price ratio measured 1.34 -- close to a stress point for milk producers (1.34 based on average U.S. milk price of $12.90 per cwt., and 16% ration priced at $192 per ton). Milk-feed price ratios in July, 1982 and July, 1983 were at more favorable levels of 1.47 and

1.45 respectively. In fact, if the 50 cent diversion assessment is subtracted from the milk price (as it should be), the effective milk-feed price ratio currently is down to 1.29. A modest upward movement in milk prices this fall combined with relatively low corn and soybean prices should ease the milk-feed price ratio upward -- a fairly powerful signal for more milk production, especially after the diversion program terminates. Meanwhile, hay prices in the U.S. are averaging about $75 per ton, close to what they were a year ago, and seemingly in ample supply.

Other Supply Factors:

1. Replacement Heifers -- A continuing concern in recent years has been the build-up and notably high ratio of replacement heifers to dairy cows. This concern was reinforced on July 1, 1984 when the highest ratio yet was recorded. The 45.6 ratio recorded this summer compares with an average ratio of 32.5 for the 1965-75 period.

Replacement Heifers, 500 Pounds and Over, U.S.

Time*	No. of Dairy Heifers	Number Heifers Per 100 Milk Cows
July 1, 1981	4,628,000	42.4
July 1, 1982	4,780,000	43.4
July 1, 1983	4,880,000	43.9
July 1, 1984	4,950,000	45.6

*July 1 heifer numbers consistently run 6-7 percent higher than January 1 numbers.

Changes in replacement heifer numbers generally are directly associated with change in milk cow numbers. But 1984, with the diversion program has been different. There clearly is an unusual build-up of high quality replacement heifers that suggests a clear signal for a surge in milk production beginning April 1, 1985.

2. Milk Cow Prices -- The average price for milk cows sold for dairy herd replacement was at a record $1,200 in 1981. Prices dropped to $1,110 in 1982 and $1,020 in 1983 as expectations in the dairy economy shifted. On January 1, 1984, milk cow prices, at the start of the diversion program, reached a recent low of $870 per head. Prices have recovered somewhat, probably because the quality of animal sold/purchased is very high. The July 1, 1984 average milk cow price was $960 ($750 in Kentucky to $1,050 in California). The longer term requirement that a lid be kept on milk production is going to mean relatively soft prices for milk cows.

3. Cull Cow Prices -- One of the bigger surprises that accompanied the diversion program was that beef prices, especially of the lower grades, did not collapse. After some initial weakness, cull cow prices recovered quickly in February, 1984 and have averaged 40-44 cents per pound (utility grade, Omaha) since that time. Prices in the 42-44 cent range are not a particular inducement to cull, but neither are they viewed as distress prices by milk producers. Beef price forecasts through 1985 suggest considerable stability in the present level (mid-August = 40 cents) of beef prices and therefore should be a fairly neutral factor in the milk production picture.

Grade A - Grade B: The milk industry moved another notch toward becoming an all Grade A industry. In 1983, 86 percent of the milk marketed off of U.S. dairy farms was of Grade A quality, up by 1 point from 1982. As recently as 1970, only 74 percent of the milk supply was Grade A. Wisconsin (74 percent A) and Minnesota (63 percent A) produce 52 percent of the total Grade B milk in the United States.

Dairy Farm Structure: The number of farms with milk cows in the United States dropped from 312,100 in 1982 to 303,710 in 1983 (minus 2.7 percent). Only about 60 percent of farms with milk cows are identified as commercial dairy farms. Concentration in the production structure is continuing at a rapid pace. In 1983 --

(1) Farms with fewer than 50 milk cows accounted for 75.5 percent of all farms with milk cows but milked only 32.5 percent of the national dairy herd.

(2) Farms with 50-99 cows were only 18.2 percent of the dairy farms but milked 32.8 percent of the cows.

(3) Only 6.3 percent (versus 3.6 percent in 1974) of the farms had 100 or more milk cows but they accounted for 34.7 percent of the cows.

The shakeout in milk production through the rest of this decade will be fairly critical as the production structure gets increasingly concentrated.

Demand/Utilization

A strong aggregate commercial demand for milk and dairy products has been a real plus factor for the milk industry in the first half of 1984. In 1983, aggregate commercial demand for milk products was 122.8 billion pounds. As of mid-year, it appears that demand will increase by 3 percent in 1984 and reach a record 126.5 billion pounds. In the first 4 months of 1984, commercial demand was up by 6 percent from last year. The surprising surge in commercial demand is evidently explained by (1) relatively favorable retail prices for milk and dairy products, (2) higher income levels associated with a stronger recovery and reduced employment, and (3) an apparent replenishment of commercial inventories (filling the pipelines). The new dairy

promotion program has not been a factor because it is only now beginning to get underway.

Fluid products continue to be the number one user of our milk supply. However, the percent of milk going to fluid use has dropped significantly in recent years due to the fact that the additional milk production has had to be manufactured. In Table 2, the year prior to the surplus build-up, 1978, is used for comparison purposes.

Table 2. Use of Market Supply of Milk, U.S., 1978 and 1983

	1978	1983
Fluid Products	46 pct.	39 pct.
Butter	16	18
Cheese	25	30
Ice Cream Products	10	9
Other Products	3	4
	100 pct.	100 pct.

Per capita consumption of milk and dairy products on a milk equivalent basis was up in 1983. However, the increase was due to the increase in government donations. Actual commercial demand versus demand plus donations for 1982 and 1983 compare as follows:

	1982	1983
Per capita consumption	561 Lbs.	578 Lbs.
Per capita commercial demand	525	522

It is per capita commercial demand that is reflecting the vigorous increase in 1984. The commercial demand base for 1983 as compared to 1975 for specific products per capita shows as follows:

Table 3. Per Capita Commercial Demand For Dairy Products, U.S., 1975 and 1983

	1975	1983
Whole Milk	181 Lbs.	129 Lbs.
Lowfat-Skim	78	101
Cream	5.6	5.9
Butter	4.4	3.8
Hard cheese	14.2	17.9
Cottage cheese	4.7	4.2
Ice cream	4.2 Gals.	4.0 Gals.
Ice milk	1.7 Gals.	1.5 Gals.

The National Dairy Promotion Board is targeting fluid milk, cheese, and butter for demand expansion in late 1984 and 1985.

Retail Prices:

In June, 1984, average retail prices for milk and dairy products across the U.S. were as follows:

Whole milk, ½ gal	$1.121
Lowfat milk, ½ gal.	$1.067
Butter, lb.	$2.054
Cheddar cheese, natural, lb.	$3.056
Ice cream, ½ gal.	$2.193

In a general sense, retail milk and dairy product prices have been virtually constant since late 1980. This phenomenon has to be a very positive demand factor. Components of the Consumer Price Index define these prices in a broader perspective.

	June, 1984	Change from June, 1983
Consumer Price Index (1967=100)	310.7	+4.2 Pct.
All Food Prices	302.0	+3.4
Dairy Product Prices	251.7	+0.8
Producer Milk Prices (1983)	270.3*	-0.1

*Before 50¢ assessment is subtracted.

While producer milk prices will show some modest strength this fall (plus 30¢), there is nothing in the longer run picture that suggests that

retail milk and dairy product prices will not continue to be a good buy relative to other goods and services.

Dairy Stocks: On June 30, 1984, wholesale cold storage holdings of dairy products in the U.S. amounted to 1,703.5 million pounds, down about 56 million pounds from a year ago, but still at a very high level. Butter stocks of 512 million pounds were down 78 million pounds from a year ago. The government (CCC) is holding 91 percent of the butter. The other major product in cold storage, natural American cheese, was in larger stock on June 30, 1984 than a year ago (1,083 million pounds as compared to 1,049 million pounds). Sixty-six percent of the cheese is held by the government. The other surplus product, nonfat dry milk is not subject to cold storage, and it is the most serious stock problem. Uncommitted CCC inventories of nonfat dry milk at the present time are 1,347 million pounds, up slightly from the record a year ago. CCC has been reselling some powdered milk for animal feed purposes at about one-half of the CCC purchase price. Dairy product stocks, to a degree, sit as a weight on top of producer milk prices. However, the CCC inventories cannot be resold into regular market channels at less than 10 percent over the CCC purchase price. This does give producer prices some room to move.

Producer Prices

Since 1978, average producer milk prices across the U.S. have moved as follows:

Year	Price Per Cwt. (at test)
1978	$10.58 per cwt.
1979	12.03
1980	13.05
1981	13.76 (record)
1982	13.59
1983	13.57*
1984	13.25**

*Subtract 46¢ average diversion assessment for year.

**Forecast; subtract 50¢ average diversion assessment for year.

Until early 1981, producer milk prices were reflecting 80 percent of parity price support decisions. However, parity has been put on the back burner, probably for good, and the subsequent legislated price support levels have descended to an equivalent of about 60 percent of parity.

The focal point of producer milk prices in the U.S. continues to be the Minnesota-Wisconsin manufacturing grade milk price series. Producer prices in virtually all Grade A markets move directly with changes in the M-W. Since July, 1983, the Minnesota-Wisconsin price has moved as follows in relation to the support price.

Month	M-W Price (3.5% BF)	Support Price (3.5% BF)
July, 1983	$12.50 per cwt.	$12.80 per cwt.
Aug	12.48	
Sept	12.48	
Oct	12.52	
Nov	12.56	
Dec	12.11	$12.31
Jan, 1984	12.05	
Feb	12.06	
Mar	12.08	
Apr	12.07	
May	12.08	
Jun	12.09	
Jul	12.17	
		To April 1, 1985

If you will note the drop in the support price to $12.31 on December 1, 1983 (when President Reagan signed the present Act), you will also see the simultaneous drop in the market price -- the M-W. There was never a better demonstration of how important a support program is to the price of a product when that product is in excess supply. Milk prices tumbled immediately by 50 cents or thereabouts throughout the United States.

Note that the M-W price consistently has been lower than the support price (actually every month since October, 1980). The competitive market price (M-W) has been lower because (1) CCC purchase prices for butter, cheese, and nonfat dry milk have not been sufficiently high to justify plants paying producers at least the support price for milk, and (2) supplies of milk have been so ample in the upper midwest that plants have not had to bid strongly in their procurement practices.

However, we now appear to be in a transition. The July M-W of $12.17 was up 8 cents (still 14 cents below the support price) and we are moving into the autumn with its seasonal decrease in milk production. I suppose that the big question in the milk industry, and the essential outlook question is -- "What is going to happen to the M-W this fall, and in 1985?" On the production side, it is reasonable to assume that the diversion program and other supply factors will continue to hold production down by 3-4 percent each month from a year ago (through the end of 1984 and through March, 1985). Demand factors indicate a continuation of the strength of the market. It is likely that the M-W will move beyond the support price early this fall and reach the $12.50 level through the winter (about 20 cents over support).

What will happen on April 1, 1985 depends to a considerable degree on who wins the election this fall. If Mr. Reagan wins, the support price is

almost sure to drop from $12.60 ($12.31) to $12.10 ($11.82). Mr. Mondale's dairy heritage would probably cancel that proposed cut. Regardless, the M-W will have shown some strength, and it is the M-W -- not the support price -- that ends up in producers' billfolds.

The other big question for next spring has to do with what happens to production when the diversion program expires. My guess, and it is not in the majority, is that we will see a significant surge in milk production. The heifer numbers, AI services this summer, low feed prices, and the cash flow pressure will put extra milk on the market. That will make the question of a further support price drop on July 1, 1985 (to $11.60/$11.33) a real possibility. In that situation, the M-W would drop with the support price. Stay tuned.

The current impact of the recent shifts in the support price and M-W can be recorded in the June blend prices paid in Federal order markets in the Midwest. Pay prices for nine markets as compared to a year ago are as follows:

Order Market	June, 1984 Blend Price	Compared to June, 1983
Southern Michigan	$12.73 per cwt.	-35¢
Ohio Valley	12.98	-23¢
Indiana	13.07	-25¢
Chicago Regional	12.53	-41¢
Minneapolis	12.31	-39¢
Iowa	12.64	-35¢
Nebraska/W. Iowa	12.81	-18¢
Kansas City	13.02	-16¢
St. Louis	12.84	-29¢

Dairy Price Support: One of the best pieces of news for the milk industry in 1984 has been the remarkable and surprising decrease in CCC purchases of dairy products. In calendar 1983, purchases were massive, reaching a record 16.813 billion pounds milk equivalent (12 percent of the milk produced in the U.S.). Purchases in 1983 included --

413.2 million pounds of butter
832.8 million pounds of cheese
1,061.0 million pounds of nonfat dry milk

I highlight those 1983 figures to show the dramatic contrast with 1984. As of mid-1984, CCC purchases of butter and cheese are down 36 percent from last year. Nonfat dry milk purchases have also decreased. For calendar 1984, it appears that CCC purchases on a milk equivalent basis will be about 10 billion pounds. Since net CCC expenditures for price support run about $170 million for each 1 billion pounds m.e. purchased, 1984 costs will be down about $1.1 billion. That goes a long way toward getting the pressure off the dairy program. The turnaround has been so marked that in late June and early July, CCC was actually selling butter back to the industry at $1.6075 per pound (versus a CCC purchase price at Chicago of $1.4325).

Supplies were very tight for a while in early summer as cream moved to the frozen dairy product industry. First signs of this occurred on June 8 when butter prices at the Chicago Mercantile Exchange jumped 5½ cents (from $1.4275 to $1.4825). On June 22 they took a bigger jump (12½ cents) to $1.6075 and since have backed off to the $1.48 level. Sales of butter to CCC resumed again in late July. Wholesale cheese and powder markets basically were not affected. But the markets are clearly in a time of change.

The dairy title of the Agriculture and Food Act of 1985 is the obvious focal point for the dairy outlook of the future. There are two camps -- income enhancement and market orientation. That is true even within the National Milk Producers Federation. Some points are pretty certain. Parity as a price mover is out. Price support through CCC purchases will continue. The debate will center on some kind of supply management base program with higher prices versus no production controls with only a safety net support price in place. My guess today is that the price/market set will prevail. I would also assume that the $11.60 support price specified in our current program is as low as we will see it in the new farm bill.

Imports-Exports: Imports and exports of dairy products continue to represent only a minor dimension of the U.S. dairy market. In 1983, imports totaled 2.62 billion pounds milk equivalent (largely cheeses), or 1.9 percent of U.S. milk production. Imports are up somewhat in 1984 because of demand for some non-quota cheeses. However, Section 22 import quotas will continue to severely limit the quantity of dairy product moving to the U.S.

Dairy exports in 1983 amounted to 2.43 billion pounds m.e., or 1.7 percent of U.S. milk production. Current wholesale prices for U.S. dairy products are more than twice the level of product prices on international markets. Prices and various trade policies will continue to severely restrict movements of U.S. dairy products to foreign markets.

Producer Income: Cash receipts to producers from marketing milk in the U.S. stood at a record $18.81 billion in 1983. However, the 50 cent producer assessments reduced actual receipts to $18.17 billion. The

combination for 1984 of less production, lower price, and producer assessments will drop producer income to $17.1 billion, about a minus 5.5 percent. The year 1985 holds much more uncertainty than usual relative to what will happen to producer income. Questions of what will happen to production when the diversion program ends, how long the demand increase can hold momentum, what price support decisions will be made in 1985, and what the dairy title of the new farm bill will look like all will have major effects on the situation.

Conclusions: The milk industry has turned it around and supply and demand are heading toward a balance. However, it is still a long way out of the woods. The M-W price will increase to about $12.50 this fall and hold at that level through the winter. That will move producer prices up to a level that they held a year ago. The diversion program will end April 1, 1985; the 50 cent assessment will disappear that day; and the support price will drop 50 cents that day. Some increase in milk production will follow the diversion program; how sizeable that increase will be will be a function of the impact of other economic forces on milk production -- interest rates, feed costs, milk prices. Major attention in 1985 will be directed at the make-up of the new dairy program. However, it seems likely that the dairy economy of the future will be more sensitive to the market and less influenced by price support levels.